

What claim is:

1. A crystalline adefovir dipivoxil, characterized in the characteristic peak expressed in terms of 2θ at about 3.60, and/or about 7.28, and/or about 15.08, and/or about 17.24, and/or about 17.96, and/or about 20.12, and/or about 22.24 in X-ray powder diffraction pattern with Cu target radiation.
2. The crystalline adefovir dipivoxil of claim 1 characterized in that it has endothermic peak at about 94.5 °C in DSC thermogram.
3. The crystalline adefovir dipivoxil of claim 1 characterized in that it has a melting point at 94 °C - 95 °C.
4. The crystalline adefovir dipivoxil of claim 1 characterized in that it has peaks at about 3320 cm^{-1} , about 3160 cm^{-1} , about 2975 cm^{-1} , about 1755 cm^{-1} , and about 1650 cm^{-1} in Fourier Transform Infrared Spectrum.
5. A composition comprising the crystalline adefovir dipivoxil of any of claims 1 to 4 and one or more pharmaceutically acceptable carriers or excipients.
6. The composition of claim 5, wherein each dosage unit contains 100-400 mg crystalline adefovir dipivoxil.
7. The composition of claim 6, wherein each dosage unit contains 1-80 mg crystalline adefovir dipivoxil.
8. A process for preparing the crystalline adefovir dipivoxil of any of claims 1 to 4, comprising steps as follows:
 - e. Placing the crystalline AD in a round bottom flask;
 - f. Adding organic solvent and dissolving AD ultrasonically to form a solution at a given concentration;
 - g. Spray drying the above organic solution.

9. The process of claim 8, wherein said organic solvent of step (b) is selected from the group consisting of anhydrous ethanol, methanol, acetone, acetoniril/di-n-butyl ether, and methylene chloride and the formed organic solution has an AD concentration of 100-300 g/L; in step
5 (c), the inlet air temperature is set at 85-100 °C, the measured inlet air temperature is 85-100 °C; the measured outlet air temperature is 50-75 °C; pump output efficiency is 5-15%; air pump output efficiency is 70%-95%; and the rate of airflow of the air compressor is at 600 L/L-800 L/L.

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10. The process of claim 8 or 9, wherein said organic solvent of step (b) is ethanol and said organic solution has an AD concentration of 200 g/L; in step (c), said inlet air temperature is set at 95 °C, the measured inlet air temperature is 95 °C; the measured outlet air
15 temperature is 60 °C; pump output efficiency is 8%; air pump output efficiency is 85%; and the rate of airflow of the air compressor is at 700 L/L.